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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/901,079
Filing Date: July 10, 2001
Appellant(s): LEE ET AL.

Eric J Nuss
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 21 December 2006 appealing from the Office action mailed 27 June 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,507,382	Sakamoto	6-2003
5,581,382	Kim	12-1996

6,356,328	Shin	3-2002
6,163,355	Chang	12-2000
6,414,729	Akiyama	7-2002
6,300,995	Wakagi	10-2001

Applicant's Admitted Prior Art (APA or ARA); Specification pp. 2-7 and Figures 1-7D

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Objections

Claim 1 objected to because of the following informalities: The limitation "contact hole exposing a drain electrode" is incorrect for a device claim per Applicant's disclosure. Please note that the finished device does not have any exposed portion of the drain electrode. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 7-10, 15-16, 24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Sakamoto et al (Sakamoto) USPAT 6,507,382 B1 and Kim USPAT 5,581,382.

As to claim 1, APA discloses an in-plane switching liquid crystal display device comprising:

first and second substrates, 30 and 32 respectively;

a gate line, 50, arranged in one direction on the first substrate;

a common line, 54, arranged on the first substrate;

a gate insulation layer, 70, on the first substrate;

a data line, 62, on the gate insulation layer;

a first passivation layer, 74, on the gate insulation layer, and a plurality of common electrodes, 54a, an insulating layer over the common electrodes, and a plurality of pixel electrodes, 66a, on said insulating layer, wherein the plurality of common electrodes and the plurality of pixel electrodes are parallel to and [Applicant's "an"] space apart from each other; and

a liquid crystal layer between the first and second substrates..

APA does not explicitly disclose a common electrode

1) in contact with the first passivation layer; a second passivation layer on the first passivation layer; a pixel electrode on the second passivation layer, wherein the first passivation layer includes a plurality of common line contact holes and wherein

each common electrode is electrically connected with the common line through the corresponding common line contact hole, and

2) wherein the second passivation layer is an inorganic material.

Sakamoto teaches 1), (entire patent, especially embodiment 2) in Drawings 3(a) and 3(b), the use of a gate insulating layer, 4, on the substrate, a common electrode, 3 (col. 8, line 23 through col. 10, line 7), on a protective overcoat layer, 12 (Applicant's the first passivation layer); an interlayer film, 13 (Applicant's second passivation layer) on the first passivation layer that includes a contact hole for connecting the pixel electrode (per Figure 3(b)); a pixel electrode, 14, on the second passivation layer; and wherein 12, 13, and 8 (Applicant's first passivation layer, second passivation layer, and an insulating protection film, respectively) includes a drain contact hole to electrically connect the pixel electrode to the drain (per Figure 3(B)) to allow for manufacture of a color display that prevents color unevenness for better display performance (col. 4, lines 1-2).

Sakamoto is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to move the plurality of common electrodes of APA to be on and in contact with the first passivation layer with contact holes in Applicant's first passivation layer, second passivation layer, and any insulating protection film, as needed to connect a plurality of common electrodes to the common line of APA; a second passivation layer on the first passivation layer; and a pixel

electrode on the second passivation layer to allow for easy manufacture of a color display that prevents color unevenness for better display performance.

Note that in considering a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom (MPEP 2144.01). Also, mere duplication of parts is not patentably distinct. Examiner considers Sakamoto to render obvious, to one of ordinary skill in the art, the motivation to provide contact holes as needed to electrically connect the common electrodes of Sakamoto on the first passivation layer to the common line of APA that is below said first passivation layer.

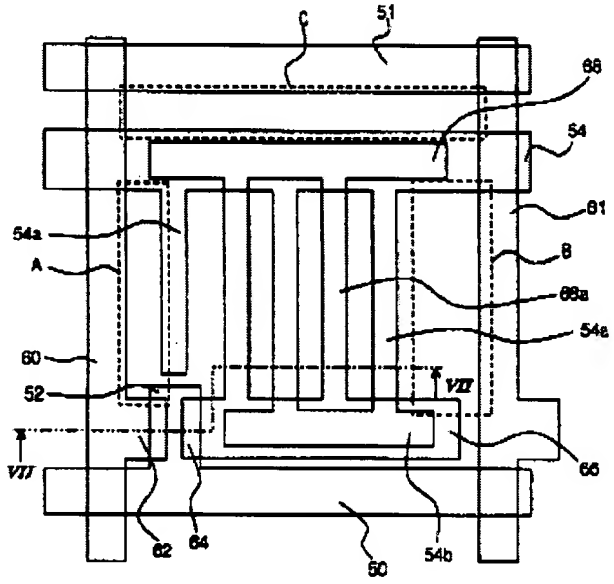
Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the common electrode on the first passivation layer with associated common electrode contact holes; a second passivation layer on the first passivation layer; and a pixel electrode on the second passivation layer of Sakamoto to allow for manufacture of a color display that prevents color unevenness for better display performance.

Kim teaches 2) wherein the second passivation layer is a nitride layer (Applicant's inorganic material) to prevent moisture penetration and resulting damage due to said moisture penetration (improves display service life) (col. 5, lines 30-48).

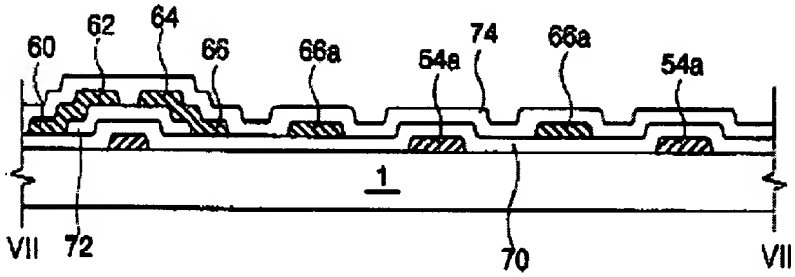
Kim is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a second passivation layer that is an inorganic material to prevent moisture penetration and resulting damage due to said moisture penetration to improve display service life.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with a second passivation layer that is an inorganic material of Kim to prevent moisture penetration and resulting damage due to said moisture penetration to improve display service life.

APA, Figure 6:



APA, Figure 7D:



Sakamoto :

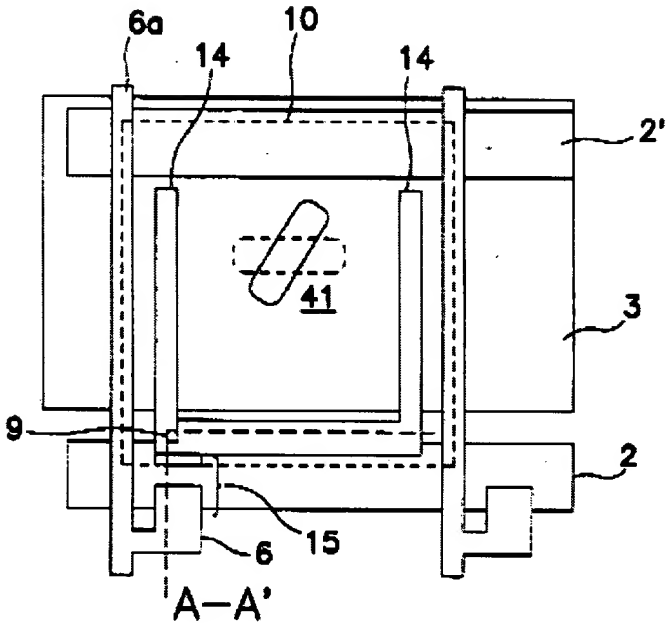
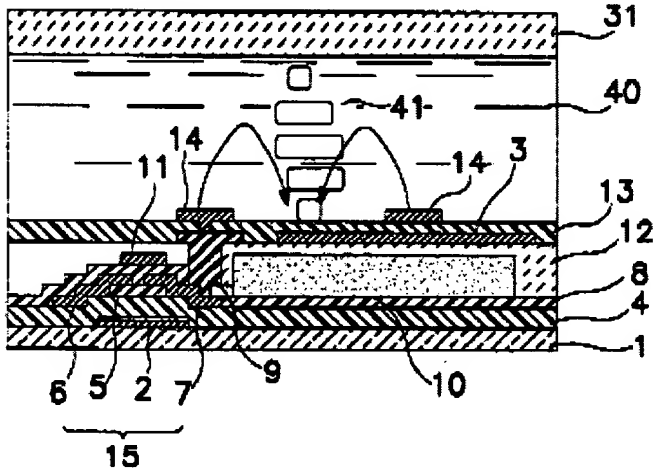


FIG. 3(a)



As to claim 7, APA discloses a device wherein the common line, 54, is parallel with the gate line, 50, and spaced apart from the gate line.

As to claim 8, APA discloses a device wherein the data line, 60, is perpendicular to the gate line, 50.

As to claim 9, APA discloses a device further comprising a thin film transistor at a crossover point of the gate line, 50, and the data line, 60.

As to claim 10, APA discloses a device wherein the thin film transistor includes a gate electrode, 52, an active layer, 72, and source, 62, and drain, 64, electrodes.

As to claim 15, APA discloses a device wherein each pixel electrode is arranged between the adjacent common electrodes.

As to claim 16, the steps of manufacturing comprising forming would have been obvious given the structure above.

As to claim 24, APA discloses the use of Al, Cr, Mo, and W for the first and second metal layers (Specification, Page 6, lines 10-11). The steps of manufacturing comprising forming, depositing, and patterning would have been obvious given the structure above.

As to claim 29, the steps of manufacturing comprising forming, depositing, patterning, and making electrically connected, would have been obvious given the structure above.

3. Claims 2-3 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto and Kim, as applied to claims 1 and 16 above, and further in view of Shin et al (Shin) USPAT 6,356,328 B1.

As to claims 2 and 3, APA in view of Sakamoto and Kim disclose the device of claim 1 and the method of claim 16.

APA in view of Sakamoto and Kim do not explicitly disclose a device wherein the common and pixel electrodes are formed of the transparent conductive material.

Shin teaches the use of common and pixel electrodes formed of the transparent conductive material ITO to increase the aperture ratio and transmittance of the LCD (Abstract and col. 3, lines 37-47).

Shin is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add common and pixel electrodes formed of the transparent conductive material ITO to increase the aperture ratio and transmittance of the LCD.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto and Kim with the common and pixel electrodes formed of the transparent conductive material ITO of Shin to increase the aperture ratio and transmittance of the LCD.

As to claims 17-20, the steps of manufacturing comprising depositing and patterning would have been obvious given the structure above.

4. Claims 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto and Kim, as applied to claims 1 and 16 above, and further in view of Chang et al (Chang) USPAT 6,163,355.

As to claim 4, APA in view of Sakamoto and Kim disclose the device of claim 1.

APA in view Michiaki do not explicitly disclose a device wherein the gate insulation layer and the second passivation layer are one of Silicon Nitride (SiN_X) and Silicon Oxide ($Si0_2$).

Chang teaches that SiN_X is used as a passivation layer in a conventional LCD.

Chang is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use SiN_X as an art-recognized material suitable for the intended purpose of forming a passivation layer.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto and Kim with SiN_X of Chang as an art-recognized material suitable for the intended purpose of forming a passivation layer (MPEP 2144.07).

As to claim 23, the steps of manufacturing comprising forming, depositing, and patterning would have been obvious given the structure above.

5. Claims 5-6 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto and Kim, as applied to claims 1 and 16 above, and further in view of Akiyama et al (Akiyama) USPAT 6,414,729 B1.

As to claims 5 and 6, APA in view of Sakamoto and Kim disclose the device of claim 1.

APA in view of Sakamoto and Kim do not explicitly disclose a device wherein the first passivation layer is formed of an organic material, wherein said organic material is one of benzocyclobutene (BCB) and acryl.

Akiyama teaches the use of an organic resin film such as BCB for the insulation layers (col. 9, lines 59-67) to shield the liquid crystal layers from the scanning and signal lines (col. 2, lines 22-24).

Akiyama is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use of BCB for the insulation layers to shield the liquid crystal layers from the scanning and signal lines.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto and Kim with the BCB insulation layers of Akiyama to shield the liquid crystal layers from the scanning and signal lines.

As to claims 21 and 22, the steps of manufacturing comprising forming, depositing, and patterning would have been obvious given the structure above.

6. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto and Kim, as applied to claims 1-10, 13-24, and 27-29 above (avoids repetition here), and further in view of Wakagi et al (Wakagi) USPAT 6,300,995 B1.

As to claim 30, APA in view of Sakamoto and Kim disclose the device above, wherein the first passivation layer is Applicant's second insulation layer and the second passivation layer is Applicant's third insulation layer.

APA in view of Sakamoto and Kim does not explicitly disclose a device wherein a plurality of first contact holes through the first and second insulation layers over the

common line; and a plurality of common electrodes on the second insulation layer, wherein the common electrodes contact the common line via the first contact holes.

Wakagi teaches in Figures 6 and 7 a device wherein a plurality of first contact holes through the first and second insulation layers over the common line; and a plurality of common electrodes on the second insulation layer, wherein the common electrodes contact the common line via the first contact holes to reduce losses in the driving voltage applied to the liquid crystal, by providing an active matrix substrate in which degradation of the metal electrode is prevented in a liquid crystal display device (col. 2, lines 6-10).

Wakagi is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a plurality of first contact holes through the first and second insulation layers over the common line; and a plurality of common electrodes on the second insulation layer, wherein the common electrodes contact the common line via the first contact holes to reduce losses in the driving voltage applied to the liquid crystal, by providing an active matrix substrate in which degradation of the metal electrode is prevented in a liquid crystal display device.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto and Kim with a plurality of first contact holes through the first and second insulation layers over the common line; and a plurality of common electrodes on the second insulation layer, wherein the common electrodes contact the common line via the first contact holes of Wakagi to reduce losses in the driving voltage applied to the

liquid crystal, by providing an active matrix substrate in which degradation of the metal electrode is prevented in a liquid crystal display device.

As to claim 31, APA discloses, in Figure 6, pixel electrodes electrically communicated with one another via a transverse pixel electrode perpendicular to the common electrodes.

7. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto, Kim, and Wakagi, as applied to claims 1-31 above, and further in view of Shin.

As to claim 32 and 33, APA in view of Sakamoto, Kim, and Wakagi disclose the device above.

APA in view of Sakamoto, Kim, and Wakagi do not explicitly disclose a device wherein the common and pixel electrodes are formed of the transparent conductive material.

Shin teaches the use of common and pixel electrodes formed of the transparent conductive material ITO to increase the aperture ratio and transmittance of the LCD (Abstract and col. 3, lines 37-47).

Shin is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add common and pixel electrodes formed of the

transparent conductive material ITO to increase the aperture ratio and transmittance of the LCD.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto, Kim, and Wakagi with the common and pixel electrodes formed of the transparent conductive material ITO of Shin to increase the aperture ratio and transmittance of the LCD.

8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto, Kim, and Wakagi, as applied to claim 30 above, and further in view of Chang.

As to claim 43, APA in view of Sakamoto, Kim, and Wakagi disclose the device above.

APA in view of Sakamoto, Kim, and Wakagi do not explicitly disclose a device wherein the gate insulation layer and the second passivation layer are one of Silicon Nitride (SiN_X) and Silicon Oxide ($Si0_2$).

Chang teaches that SiN_X is used as a passivation layer in a conventional LCD.

Chang is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use SiN_X as an art-recognized material suitable for the intended purpose of forming a passivation layer.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto, Kim, and Wakagi with SiN_X of Chang as an art-recognized material suitable for the intended purpose of forming a passivation layer (MPEP 2144.07).

9. Claim 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Sakamoto, Kim, and Wakagi, as applied to claim 30 above, and further in view of Akiyama.

As to claims 35 and 36, APA in view of Sakamoto, Kim, and Wakagi disclose the device above.

APA in view of Sakamoto, Kim, and Wakagi do not explicitly disclose a device wherein the first passivation layer is formed of an organic material, wherein said organic material is one of benzocyclobutene (BCB) and acryl.

Akiyama teaches the use of an organic resin film such as BCB for the insulation layers (col. 9, lines 59-67) to shield the liquid crystal layers from the scanning and signal lines (col. 2, lines 22-24).

Akiyama is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use of BCB for the insulation layers to shield the liquid crystal layers from the scanning and signal lines.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Sakamoto, Kim, and Wakagi with the BCB insulation layers of Akiyama to shield the liquid crystal layers from the scanning and signal lines.

(10) Response to Argument

Argument:

Examiner failed to establish *prima facie* obviousness in rejection of claims 1, 7-10, 15-16, 24, and 29 for three reasons, reason 1:

There is no valid suggestion or motivation to combine Sakamoto to Applicant's Admitted Prior Art (ARA) because the modification would render the combination unsatisfactory for its intended purpose (MPEP 2143.01(V)). The modification would result in severe reduction of aperture ratio.

Response:

It is respectfully pointed out that Appellant has not claimed any minimum required aperture ratio. Appellant has not claimed a transmissive display. Appellant has not claimed a transflective display. Appellant has not claimed a reflective display. Appellant has not claimed comb-type common electrodes. Appellant has not claimed comb-type pixel electrodes. Appellant has not limited the present broad claims to any particular configuration that would be in contrast to the valid and functional combination of Sakamoto with APA.

Many conventional reflective displays use opaque electrodes that cover most or all of the sub-pixel area. Many conventional transmissive displays use opaque comb-type electrodes. One of ordinary skill in the art of liquid crystal displays is well aware of the various electrode options for both comb-type common electrode and non-comb-type common electrode configurations (sometimes called fringe-field) for in-plane (parallel to

substrate) switching liquid crystal displays. One of ordinary skill in the art would not be confused by any of the various conventional electrode configurations.

However, **Sakamoto was not combined to teach electrode configurations**; Sakamoto was combined to teach the particular stacking of insulation layers between the metal layers used to comprise the electrodes. The electrode configuration of APA is not modified by Sakamoto per Final Rejection. Sakamoto is applied for merely the addition of interstitial insulating layers. In virtually every case, one does not apply the **entire structure** of the secondary reference, however, the entire teaching of the secondary reference is considered. Adjusting the electrode height above the substrate with insulating layers is a well known practice for gaining improved switching of the liquid crystal layer for improved display performance (prevent uneven color, Sakamoto col. 4, lines 1-2) per Final Rejection. Moving the electrodes closer to the liquid crystal layer and farther away from the underlying scan and data lines improves electrostatic field isolation (gets them farther away from the electrostatic "noise" of underlying electrical conductors) per Figure 3(b).

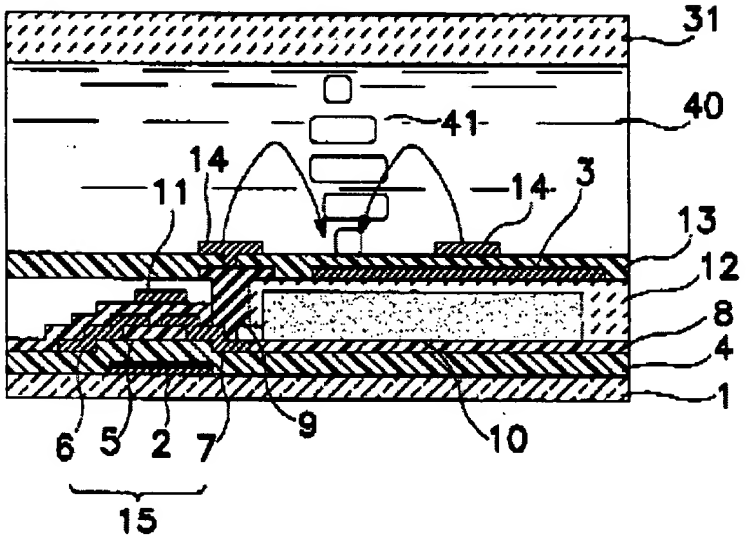


FIG. 3(b)

This beneficial effect of electric field isolation is applicable to all active matrix liquid crystal displays regardless of electrode configuration. Examiner considers Sakamoto to be a robust teaching rendering the addition of the interstitial insulating layers obvious to one of ordinary skill in the art, and one of ordinary skill in the art would perceive the strong motivation to combined given the teachings of Sakamoto [see col. 3, lines 25-55].

Argument:

Examiner failed to establish *prima facie* obviousness in rejection of claims 1, 7-10, 15-16, 24, and 29 for three reasons, reason 2:

There is no reasonable expectation of success in combining Sakamoto to APA. The common electrode of Sakamoto would reduce aperture ratio resulting in an unsuccessful display.

Response:

It is respectfully pointed out that Sakamoto was not applied to alter the electrodes of APA. Rather Sakamoto was applied to add the interstitial insulation layers per Final Rejection.

Adjusting the electrode height above the substrate with insulating layers is a well known practice for gaining improved switching of the liquid crystal layer for improved display performance (prevent uneven color, Sakamoto col. 4, lines 1-2) per Final Rejection. Moving the electrodes closer to the liquid crystal layer and farther away from the underlying scan and data lines improves electrostatic field isolation (gets them farther away from the electrostatic "noise" of underlying electrical conductors). This beneficial effect is applicable to all active matrix liquid crystal displays regardless of electrode configuration. Examiner considers Sakamoto to be a robust teaching rendering the addition of the interstitial insulating layers obvious to one of ordinary skill in the art, and one of ordinary skill in the art would perceive the strong motivation to combined given the teachings of Sakamoto [see col. 3, lines 25-55].

Argument:

Examiner failed to establish *prima facie* obviousness in rejection of claims 1, 7-10, 15-16, 24, and 29 for three reasons, reason 3:

APA in view of Sakamoto does not teach "wherein each common electrode is electrically connected with the common line through a corresponding common line contact hole". The common electrode of Sakamoto electrically floats.

Response:

One of ordinary skill in the art would know to not electrically disconnect the common electrode of APA from the common line of APA when moving the common electrode of APA to a higher level (on top of the first passivation layer of Sakamoto). Clearly one of ordinary skill in the art would not forget to retain needed electrical connections. An argument that one of ordinary skill in the art of liquid crystals would not know to retain needed electrical connections, or that one of ordinary skill in the art of liquid crystal would not know to use a contact hole is considered unreasonable. One of ordinary skill in the art of liquid crystal displays knows how to retain/make needed electrical connections. However, Sakamoto teaches use of a contact hole to electrically connect a common electrode, 3, to underlying line, 20, in Figure 1(b):

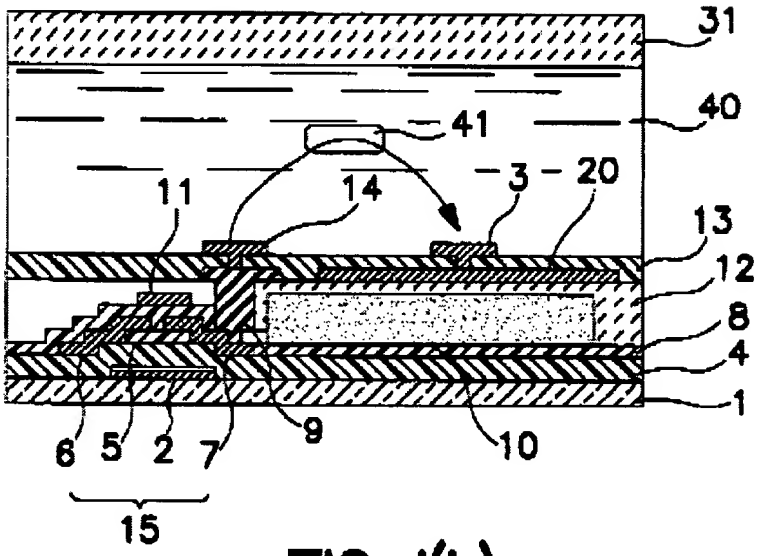


FIG. 1(b)

Examiner considers Sakamoto to fully enable one of ordinary skill in the art of liquid crystals to know how to successfully move the common electrode of APA to be on top of the first passivation layer of Sakamoto without forgetting to electrically connect it to the underlying common line of APA by using a contact hole as illustrated in Figure 1(b) of Sakamoto as motivated for prevention of color unevenness of Sakamoto [col. 4, lines 1-2]. Examiner does not see where Sakamoto teaches a "floating" common electrode and examiner does not know of any displays that do not keep the common electrodes at a common electric potential (that's what they get their name from); however, that is irrelevant to the Final Rejection because Sakamoto was not applied to teach any changes to the electrode method of driving. Sakamoto was applied to teach the addition if interstitial insulating layers as motivated by better electric field isolation for reduced color unevenness [col. 4, lines 1-2 and col. 3, lines 25-55].

Argument:

One would not be motivated to combine Sakamoto to APA.

Response:

It is respectfully pointed out that Sakamoto was applied to teach the addition if interstitial insulating layers as motivated by better electric field isolation for reduced color unevenness [col. 4, lines 1-2 and col. 3, lines 25-55]. Examiner maintains the Final Rejection is proper with robust motivation to combine Sakamoto to APA resulting in proper establishment of *prima faci* obviousness.

Argument:

Kim fails to cure the deficiencies of Sakamoto. Kim is not combinable because it is not an in-plane switching device.

Response:

It is respectfully pointed out that examiner maintains there are no deficiencies of the properly combined Sakamoto per responses above. The purpose of the inorganic second passivation layer of Kim is to prevent display device damage due to moisture penetration [improves service life, col. 5, lines 30-48] which has nothing to do with the plane of switching the liquid crystal material. The motivation/value of the inorganic second passivation layer of Kim is therefore well known in the art to be fully applicable

to any display, especially any display with otherwise vulnerable transistors, including all active matrix displays, both in-plane switching and non-in-plane switching. Applicant has not otherwise argued the combination of Kim and has thereby acquiesced the rejection of the inorganic second passivation layer.

Argument:

B. Rejection of claims 30 and 31 further in view of Wakagi is improper.

Wakagi does not cure the deficiencies cited above.

Wakagi is not combinable due to differences in electrode usage relative Sakamoto.

Response:

It is respectfully pointed out that examiner maintains there are no deficiencies per responses above.

It is respectfully pointed out that the electrode usage (planar vs comb etc.) of Sakamoto was not applied, so any differences in the electrode usage or objectives of Sakamoto are irrelevant to combining Wakagi. Sakamoto was applied to teach the addition if interstitial insulating layers as motivated by better electric field isolation for reduced color unevenness [col. 4, lines 1-2 and col. 3, lines 25-55]. Wakagi is a similar teaching with more explicit teachings as to contact hole usage. Examiner cannot see anything incompatible with the references as applied. Examiner maintains the Final Rejection is proper.

Argument:

C. Dependent claims are allowable because they depend from allowable base claims.

Response:

It is respectfully pointed out that base claims are not allowable per Final Rejection and per responses above.

Argument:

Chang fails to cure above deficiencies.

Chang provides no motivation to use SiNx.

Response:

It is respectfully pointed out that examiner maintains there are no deficiencies per Final Rejection and per responses above.

Cheng teaches that SiNx is used in conventional displays as a suitable material for the intended purpose of forming a passivation layer (commonly used material type). This is a strong case of *prima faci* obviousness per MPEP 2144.07. SiNx is a very commonly used inorganic insulating material used widely for passivation layers in the art of liquid crystal displays for many years prior to the claimed invention. Applicant has

not otherwise argued the combination of Cheng and has thereby acquiesced the rejection.

Argument:

Akiyama fails to cure the deficiencies above.

Akiyama does not teach any advantage to using an organic resin instead of an inorganic insulating film.

Response:

It is respectfully pointed out that examiner maintains there are no deficiencies per Final Rejection and per responses above.

It is respectfully pointed out that Akiyama teaches the use of an organic resin, specifically the claimed BCB, for purposes of shielding the liquid crystal layers from the scanning and signal lines [col. 9, lines 59-67 and col. 2, lines 22-24]. Applicant has not otherwise argued the combination of Akiyama and has thereby acquiesced the rejection.

Argument:

Shin fails to cure the deficiencies above.

Response:

It is respectfully pointed out that examiner maintains there are no deficiencies per Final Rejection and per responses above.

It is respectfully pointed out that Applicant has not otherwise argued the combination of Shin and has thereby acquiesced the rejection.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Tim Rude

Conferees:

Ricky Mack

David Nelms